UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,758	10/06/2006	Reiji Matsubara	125362	8423

25944 7590 12/04/2008

OLIFF & BERRIDGE, PLC
P.O. BOX 320850
ALEXANDRIA, VA 22320-4850

EXAMINER	
ORLANDO, AMBER ROSE	
ART UNIT	PAPER NUMBER
1797	
MAIL DATE	DELIVERY MODE
12/04/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/549,758	MATSUBARA ET AL.	
	Examiner	Art Unit	
	AMBER ORLANDO	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 August 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 August 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This action is in response to the correspondence filed 08/28/2008.

The drawings have been amended.

Claims 1-12 are rejected.

Claims 1-12 have been examined and are pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claim 1-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Hamanaka et al. WO 03/011427 A1 (Translation provided by US 2004/0211164) in view of Hijikata WO 2002/079618 (translation provided by US 7,087,286).

5. Regarding claims 1-5, the Hamanaka et al. reference discloses a honeycomb structure comprising: a segment part including a plurality of first honeycomb segments bonded together by a bonding material (figure 15, objects 8 and center segments), the plurality of first honeycomb segments having a plurality of through holes passing through along a one axis and being separated by partition walls (figure 2(c) objects 3 and 2); and a plurality of second honeycomb segments arranged in the periphery of the segment part in a cross section perpendicular to the one axis, bonded and integrated with the segment part (figure 15 objects 12 and 8), having a plurality of through holes passing through along the one axis and being separated by partition walls (figure 2(c) objects 3 and 2), a cross sectional area of the first honeycomb segments is smaller than the cross sectional area of the second honeycomb segments in the cross section perpendicular to the one axis (figure 15, object 12 and center segments), a cross sectional area of the segment part is equal to or above 1/3 and equal to or below 1/2 of the cross sectional area of the entire honeycomb structure in the cross section perpendicular to the one axis (figure 15, object 12 and center segments, and page 5 paragraph [0060]), the cross sectional area of the first honeycomb segment is smaller than a square area with 40mm sides, the cross sectional area of the second honeycomb

segment is larger than a square area with 30mm sides, wherein, the cross sectional area of the second honeycomb segment is 4 times or greater than the cross sectional area of the fist honeycomb segment (figure 15, object 12 and center segments, and page 5 paragraph [0060]). The reference does not disclose the center segments of figure 15 being separated by a bonding material.

6. The Hijikata reference discloses segments being separated by a bonding material (column 4, lines 49-52).

7. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Hamanaka et al. reference to include segments being separated by a bonding material (Hijikata column 4, lines 49-52) because this provides heat resistance and cushioning to the honeycomb segments.

8. For claims 7-11, the Hamanaka et al. reference does not explicitly state, the cross sectional area of the first and the second honeycomb segments are adjusted that an increase of a pressure loss is equal to or less than 20%, assuming that the pressure loss of exhaust gas passing through a same shaped honeycomb structure only formed by bonding honeycomb segments having square cross sections with 35mm side. The reference does disclose the square cross sections with 35mm sides (page 5 paragraph [0060]) and the need to optimize the size of the segment in order to obtain a desired pressure loss (page 3 paragraph [0036]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the cross sectional area of the first and the second honeycomb segments are adjusted that an increase of a pressure loss is equal to or less than 20%, assuming that the pressure

loss of exhaust gas passing through a same shaped honeycomb structure only formed by bonding honeycomb segments having square cross sections with 35mm side, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch,* 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

9. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamanaka et al. WO 03/011427 A1 (Translation provided by US 2004/0211164) and Hijikata WO 2002/079618 (translation provided by US 7,087,286) as applied to claim 1 above, and further in view of Kondo et al. WO 03/021089 A1 (Translation provided by US 2004/0206044).

10. For claim 6, the Hamanaka et al. reference does not disclose a cross sectional shape of the honeycomb structure in the cross section perpendicular to the one axis is irregular.

11. The Kondo et al. reference discloses a cross sectional shape of the honeycomb structure in the cross section perpendicular to the one axis is irregular (page 4, paragraph [0041]).

12. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Hamanaka et al. reference to include a cross sectional shape of the honeycomb structure in the cross section perpendicular to the one axis is irregular (page 4, paragraph [0041]) in order to enhance the isostatic strength of the structure.

13. For claims 12, the Hamanaka et al. reference does not explicitly state, the cross sectional area of the first and the second honeycomb segments are adjusted that an increase of a pressure loss is equal to or less than 20%, assuming that the pressure loss of exhaust gas passing through a same shaped honeycomb structure only formed by bonding honeycomb segments having square cross sections with 35mm side. The reference does disclose the square cross sections with 35mm sides (page 5 paragraph [0060]) and the need to optimize the size of the segment in order to obtain a desired pressure loss (page 3 paragraph [0036]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the cross sectional area of the first and the second honeycomb segments are adjusted that an increase of a pressure loss is equal to or less than 20%, assuming that the pressure loss of exhaust gas passing through a same shaped honeycomb structure only formed by bonding honeycomb segments having square cross sections with 35mm side, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch,* 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Response to Arguments

1. Applicant's arguments filed 08/28/2008 have been fully considered but they are not persuasive.

2. For claim 1, the applicant argues that the Hamanaka reference discloses "the idea that the segments are being separated by the flow channel separator, not by a bond layer."

3. The examiner agrees with this statement. Instead the Hijikata reference discloses segments being separated by a bonding material (column 4, lines 49-52). Taken collectively, the Hamanaka and Hijikata references disclose the applicants' invention. The examiner would also like to point out that the flow channel separator of the Hamanaka reference does not allow the flow of air to pass through, which the bonding material of the Hijikata reference also does not allow.

4. In response to applicant's arguments against the references individually (the Hamanaka reference with regards to the bond layer), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

5. The applicant also argues that "the description in Hamanaka is different in content from the main point of the embodiment of the present application".

6. The examiner disagrees and further contends that the applicant fails to fully explain the "main point" of the present application and how it differs from the prior art. The examiner interprets the Hamanaka reference to be describing that changing the cross sectional area of the honeycomb segments affects the pressure loss across the filter body (Hamanaka page 3 paragraph [0036]); therefore if there is a desired pressure loss, it would be obvious to one having ordinary skill in the art to change the cross sectional area of the honeycomb segments to achieve the specific pressure loss.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMBER ORLANDO whose telephone number is (571)270-3149. The examiner can normally be reached on Mon.-Thurs. (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on (571) 272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AO

/Walter D. Griffin/
Supervisory Patent Examiner, Art Unit 1797